24.2 v.2
11/15/1996

Woodward-Clyde

Engineering & sciences applied to the earth & its environment

November 15, 1996

Mr. Brian Anderson
Boeing - Queen City Farms
22715 SE 168th Way
Maple Valley, WA 98038

Subject: Queen City Farms Soil Stabilization Project Completion Report
Project No. 944057NB

Dear Mr. Anderson:

Below is a summary of the soil stabilization work recently completed at the Queen City Farms site.

BACKGROUND

Remedial action at the Queen City Farms Superfund site includes construction of a slurry wall and extension of an existing cap to isolate contaminants remaining in the subsurface. The slurry wall has been completed, and cap expansion is currently underway.

Approximately 2,500 cubic yards of potentially impacted soils and drum debris were encountered during recent excavation activities associated with the slurry wall construction. The soil and drum fragments were stockpiled on site and covered with plastic. Soil samples were collected and tested for Toxicity Characteristic Leaching Procedure (TCLP) metals, volatile organic compounds, semivolatile organic compounds/polynuclear aromatic hydrocarbons, pesticides/polychlorinated biphenyls, chromium III and VI, and total petroleum hydrocarbons (TPH). From these tests, TPH and lead were found to be present at levels warranting remediation. The soil samples from the stockpile contained TPH at levels ranging from 1,200 to 150,000 milligrams per kilogram (mg/kg). The maximum TCLP result for lead was 45 milligrams per liter (mg/L).

The objectives of the soil stabilization project were to 1) reduce overall lead and TPH mobility in the soils, and 2) isolate the treated soils and drum fragments within the slurry wall and under a cap.

BENCH TESTING AND WORK PLAN/SPECIFICATIONS DEVELOPMENT

To address the first project objective, a bench-scale mix design program was undertaken to identify the appropriate type and concentration of admixtures needed to adequately reduce

Woodward-Clyde Consultants
1500 Century Square • 1501 Fourth Avenue • Seattle, Washington 98101-1662
206-343-7933 • Fax 206-343-0513

contaminant mobility. A total of ten samples were tested using varying amounts of cement, cement/sodium silicate, and cement/bentonite.

The sodium silicate was found to be unnecessary. The bentonite, which was expected to be available as excess from the slurry wall construction, was unattainable. Based on the test results, a 12 percent cement/soil ratio was chosen. Table 1 summarizes the test results and Attachment 1 includes the report provided by the soil testing laboratory and the corresponding TCLP-lead analytical results.

A work plan and specifications were developed and presented in draft form to the U.S. Environmental Protection Agency (EPA) on September 3, 1996. Comments from the EPA were received on September 9, 1996. The comments were incorporated into the document and the final work plan/specifications was submitted on September 25, 1996.

SOIL STABILIZATION AND PLACEMENT

Site preparation consisted of mixing pit and cement stockpile pit excavation, and installation of a temporary filter fabric fence. Soil stabilization began on October 2 and was conducted by mixing soil, dry cement, and water in the mixing pit using a backhoe. Once thoroughly mixed, the soils were transported via dumptruck to an area of the site that will be capped. Treatment was completed on October 17. At that time, the mixing pit and stockpile areas were over-excavated by approximately one foot to remove remaining potentially impacted soils. The over-excavated soils were placed over the treated soils.

CONFIRMATION SAMPLING

Five treated soil samples were collected on October 9, 1996 to assess treatment efficacy. The samples were tested for TCLP-lead after approximately seven days of curing. The test results are shown in Table 2, with the laboratory summary report provided in Attachment 2. The test results show that none of the TCLP sample extracts contained lead above the method detection limit. Consequently, all treated soil samples were below the 5.0 mg/L TCLP-lead criteria established for the project.

Following over-excavation, two surface soil samples were collected at the former soil stockpile area and five surface soil samples were collected from the mixing pit. The mixing pit samples consisted of one sample from each sidewall and one from the pit bottom. The samples were collected on October 16, 1996 and tested for TCLP-lead. All soil samples were below the 5.0 mg/L TCLP-lead criteria. The results are shown in Table 3. The laboratory summary report is provided in Attachment 2.

SUMMARY

The treated soil samples indicate that contaminant mobility reduction objectives have been met. The contaminants are further isolated from the environment by placement within a slurry wall and cap system. The confirmation samples taken from the former stockpile and mixing pit areas indicate that impacted soils failing the TCLP criteria do not remain at these locations.

If you have any questions about the information in this submittal, please telephone us at 343-7933. We appreciate the opportunity to provide you with these services, and look forward to working with you in the future.

Sincerely,

Ted Wall, P.E.
Project Manager

Gary Dupuy, R.G.
Vice President

TW:wp

Attachments:

1 - Bench Test Results
2 - Treated Soil, Mixing Pit, Stockpile Area Confirmation Sample Results

Table 1

SOIL STABILIZATION TEST RESULTS

SAMPLE NUMBER	CEMENT:SOIL RATIO (percent)	SODIUM SILICATE[1]	TCLP-LEAD (mg/L)[2]	APPROXIMATE CURE TIME (hrs)
6% C + NA	6%	Yes	8.0	60
9% C + NA	9%	Yes	1.3	60
12% C + NA	12%	Yes	<0.1	60
15% C + NA	15%	Yes	<0.1	60
20% C + NA	20%	Yes	<0.1	60
9% C	9%	No	1.0	60
12% C	12%	No	<0.1	60
15% C	15%	No	<0.1	60
10% C/Bentonite[3]	10%	No	9.0	24
10% C/Bentonite[3]	10%	No	<0.1	120
Untreated Soil Comp[4]	NA	NA	21.5	NA

Notes:
(1) Sodium Silicate:Soil ratio = 1 gallon : 1 ton
(2) Detection Limit = 0.1 mg/L
(3) Bentonite slurry used rather than water
(4) Untreated soil
NA Not applicable

Table 2

TREATED SOIL TEST RESULTS

SAMPLE NUMBER	TCLP-LEAD (mg/L)[1]
QCFSS-1	<0.1
QCFSS-2	<0.1
QCFSS-3	<0.1
QCFSS-4	<0.1
QCFSS-5	<0.1

Note:
1 Detection Limit 0.1 mg/L

Table 3

STOCKPILE AREA/MIXING PIT CONFIRMATION SAMPLES

SAMPLE NUMBER	TCLP-LEAD (mg/L)[1]
Stockpile Area	
QCFSS-6	0.04
QCFSS-7	<0.02
Mixing Pit	
QCFSS-8	<0.02
QCFSS-9	<0.02
QCFSS-10	<0.02
QCFSS-11	<0.02
QCFSS-12	<0.02

Note:
1 Detection Limit 0.02 mg/L

SOIL
TECHNOLOGY, INC.
SPECIALIZING IN PHYSICAL SOIL TESTING

7865 N.E. Day Road West
Bainbridge Island, WA 98110
(206)842-8977 Fax842-9014
Toll Free 1-800-546-5022

September 17, 1996

Mr. Ted Wall
Woodward Clyde Consultants, Inc.
1501 Fourth Avenue, Suite 1500
Seattle, Washington 98101-1662

Dear Mr. Wall:

Soil Technology, Inc. has completed the Boeing Queen city Farms project stabilization treatability testing scope of work described in our letter to you dated September 5, 1996, and the additional mix requested by yourself. A description of the work and a summary of the observations are on the attached page.

Thank you for utilizing Soil Technology, Inc. on this project. Please call me to discuss any questions you may have on the data or its presentation.

Best Regards,
SOIL TECHNOLOGY, INC.

Harold Benny,
Laboratory Manager

Woodward Clyde Consultants, Inc.
Boeing / Queen City Farms Stabilization Treatability Testing

Following guidance from Woodward Clyde Consultants, Soil Technology prepared soil stabilization mixes utilizing Portland cement at 6, 9, 12, 15, and 20%, based on the wet weight of as received soil. The cement was mixed with water to form a slurry. Sodium Silicate was then added to the slurry at the rate of 1 gallon per ton of as received soil. This mixture was then added to the moist soil and mixed thoroughly. Additional water was added until a "workable" consistency was achieved. These mixes were then placed in plastic bags to cure. To evaluate the effectiveness of the Sodium Silicate, three cement only mixes were prepared in a similar manner, utilizing 9, 12, and 15% cement. The water content was varied to maintain approximate uniform consistency for all mixes. The mixes were prepared on Friday, September 6, 1996 and cured in the lab until Monday, September 9, 1996. By then, all mixes were hard and brittle. Samples for TCLP were hand delivered to Analytical Resources, Inc. Following review of the TCLP data by Woodward Clyde, an additional mix utilizing 10% cement and bentonite slurry from the site was requested. It was batched and cured overnight. Following about 16 hours of curing the mix was firm and crumbled. The sample was hand delivered to the lab for TCLP analysis. The relative set or hardness of each mix is described in the table below.

Table 1: Visual Observations of the Set of Stabilization Mixes

Mix	Curing Time			
	1 Hour	2 Hours	4 Hours	8 Hours
6% Cement/Na Silicate	Soft, Workable	Firm, Workable	Firm, Less Workable	Crumbles
9% Cement/Na Silicate	Firm, Workable	Firm, Workable	Firm, Less Workable	Crumbles
12% Cement/Na Silicate	Firm, Workable	Firm, Workable	Firm, Less Workable	Crumbles
15% Cement/Na Silicate	Firm, Workable	Firm, Workable	Crumbles	Crumbles
20% Cement/Na Silicate	Firm, Workable	Firm, Workable	Crumbles	Crumbles
9% Cement	Firm, Workable	Firm, Workable	Crumbles	Crumbles
12% Cement	Firm, Workable	Firm, Workable	Crumbles	Crumbles
15% Cement	Firm, Workable	Firm, Workable	Crumbles	Crumbles
10% Cement/Bentonite	Soft, Workable	Soft, Workable	Soft, Workable	NA

Analytical Resources, Incorporated
Analytical Chemists and Consultants

1 November 1996

Brian Anderson
The Boeing Company
Queen City Farms
22715 SE 168th Way
Maple Valley, WA 98038

RE: Project: QCF Waste Characterization / ARI Job Q061

Dear Brian:

Please find enclosed an original chain of custody (COC) record and a set of analytical results for the above referenced project. Nine solid samples were received in good condition from Soil Technology, Inc. on September 9, 1996.

Analysis for the requested parameters proceeded without incident. Quality control analysis results are included for your review. Copies of the reports will be kept on file at ARI. Please contact me if you have any questions.

Sincerely,

ANALYTICAL RESOURCES, INC.

Jeff J. Reitan
Project Manager
(206) 389-6153

JJR/jr
enclosure

cc: Ted Wall: Woodward Clyde Consultants

Chain of Custody Record & Laboratory Analysis Request

Date: 9/9/96
Page 1 of 2
Number of coolers: 1
Cooler Temp: ambient
Rad. Survey: background

Analytical Resources, Incorporated
Analytical Chemist and Consultants
400 Ninth Avenue North
Seattle, WA 98109-4708
(206) 621-6490
(206) 621-7523 (Fax)

ARI Client: SOIL TECHNOLOGY Phone#: 842-8977

Client Contact: HAROLD BENNY

Client Project ID: J-970

Samplers: HAROLD BENNY + KIM EVERS

	Sample ID	Date	Time	Matx	No Cont	Lab ID	Analysis Required: TCLP-LEAD	Notes/Comments
1	6% C+Na	9/9/96	10:00				✓	
2	9% C+Na						✓	
3	12% C+Na						✓	
4	15% C+Na						✓	
5	20% C+Na						✓	
6	9% C only						✓	
7	12% C only						✓	

ARI Project No: Q061

Comments/Special Instructions:

PLEASE BILL BOEING

	Relinquished by: (Signature)	Printed Name	Company	Date	Time
	Kimberly Evers	KIMBERLY EVERS	STI	9/9/96	10:00 AM.
	Received by: (Signature)	Printed Name	Company	Date	Time
		Jeff J. Reiza	ARI	9/9/96	10:30 AM

Relinquished by: (Signature) / Printed Name: / Company: / Date: Time:

Relinquished by: (Signature) / Printed Name: / Company: / Date: Time:

Received by: (Signature) / Printed Name: / Company: / Date: Time:

Received by: (Signature) / Printed Name: / Company: / Date: Time:

Chain of Custody Record & Laboratory Analysis Request

Date: 9/9/96
Page 2 of 2
Number of coolers: 1
Cooler Temp: _____
Rad. Survey: _____

Analytical Resources, Incorporated
Analytical Chemist and Consultants
400 Ninth Avenue North
Seattle, WA 98109-4708
(206) 621-6490
(206) 621-7523 (Fax)

ARI Client: SOIL TECHNOLOGY Phone#: 842-8977

Client Contact: HAROLD BENNY

Client Project ID: J-970

Samplers: HAROLD BENNY + KIM EVERS

	Sample ID	Date	Time	Matx	No Cont	Lab ID	Analysis Required: TCLP-LEAD	Notes/Comments
1	15% Conly	9/9/96	10:00				✓	
2	UNTREATED Soil Comp	9/9/96	10 00				✓	
3								
4								
5								
6								
7								

ARI Project No: Q061

Comments/Special Instructions:

PLEASE BILL BOEING

Relinquished by: (Signature) Kimberly Evers	Relinquished by: (Signature)	Relinquished by: (Signature)
Printed Name: KIMBERLY EVERS	Printed Name:	Printed Name:
Company: STI	Company:	Company:
Date: 9/9/96 Time: 1000AM.	Date: Time:	Date: Time:
Received by: (Signature)	Received by: (Signature)	Received by: (Signature)
Printed Name: Jeff J. Rezan	Printed Name:	Printed Name:
Company: ARI	Company:	Company:
Date: 9/9/96 Time: 10:00 AM	Date: Time:	Date: Time:

ANALYTICAL
RESOURCES
INCORPORATED

INORGANICS ANALYSIS DATA SHEET **Sample No: 6% C+Na**
TCLP METALS

Lab Sample ID: Q061A
LIMS ID: 96-14866
Matrix: Soil

QC Report No: Q061-Boeing Corporate SHEA
Project: Queen City Farms

Date Sampled: 09/09/96
Date Received: 09/09/96

Data Release Authorized: CTJ
Reported: 09/12/96

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L
1311	09/09/96	6010	09/10/96	**7439-92-1**	**Lead**	0.1	**8.0**

U Analyte undetected at given RL

RL Reporting Limits

ANALYTICAL
RESOURCES
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INORGANICS ANALYSIS DATA SHEET
TCLP METALS

Sample No: 6% C+Na
Lab Sample ID: Q061A — QC Report No: Q061-Boeing Corporate SHEA
LIMS ID: 96-14866 — Project: Queen City Farms
Matrix: Soil

Date Received: 09/09/96

Data Release Authorized: GTY
Reported: 09/12/96

MATRIX SPIKE QUALITY CONTROL REPORT

Analyte	Sample mg/L	Spike mg/L	Spike Added	% Recovery	Q
Lead	8.0	31.6	25.0	94.4%	

'Q' codes:
- N = control limit not met
- H = %R not applicable, sample concentration too high
- * = RPD control limit not met
- NA = Not applicable - analyte not spiked

Control Limits:
- Percent Recovery: 75-125%
- RPD: +/-20%

ANALYTICAL
RESOURCES
INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TCLP METALS

Sample No: 6% C+Na
Lab Sample ID: Q061A
QC Report No: Q061-Boeing Corporate SHEA
LIMS ID: 96-14866
Project: Queen City Farms
Matrix: Soil

Date Received: 09/09/96

Data Release Authorized:
Reported: 09/12/96

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Sample mg/L	Duplicate mg/L	RPD	Control Limit	Q
Lead	8.0	8.2	2.5%	+/- 20 %	

'Q' codes:
* = control limit not met
L = RPD not valid, alternate limit = detection limit

ANALYTICAL
RESOURCES
INCORPORATED

INORGANICS ANALYSIS DATA SHEET Sample No: 9% C+Na
TCLP METALS

Lab Sample ID: Q061B
LIMS ID: 96-14867
Matrix: Soil

QC Report No: Q061-Boeing Corporate SHEA
Project: Queen City Farms

Date Sampled: 09/09/96
Date Received: 09/09/96

Data Release Authorized: GM
Reported: 09/12/96

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L
1311	09/09/96	6010	09/10/96	7439-92-1	Lead	0.1	1.3

U Analyte undetected at given RL

RL Reporting Limits

ANALYTICAL
RESOURCES
INCORPORATED

INORGANICS ANALYSIS DATA SHEET Sample No: 12% C+Na
TCLP METALS

Lab Sample ID: Q061C
LIMS ID: 96-14868
Matrix: Soil

QC Report No: Q061-Boeing Corporate SHEA
Project: Queen City Farms

Date Sampled: 09/09/96
Date Received: 09/09/96

Data Release Authorized: CTY
Reported: 09/12/96

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L
1311	09/09/96	6010	09/10/96	7439-92-1	Lead	0.1	0.1 U

U Analyte undetected at given RL

RL Reporting Limits

ANALYTICAL
RESOURCES
INCORPORATED

INORGANICS ANALYSIS DATA SHEET Sample No: 15% C+Na
TCLP METALS

Lab Sample ID: Q061D
LIMS ID: 96-14869
Matrix: Soil

QC Report No: Q061-Boeing Corporate SHEA
Project: Queen City Farms

Date Sampled: 09/09/96
Date Received: 09/09/96

Data Release Authorized: CTJ
Reported: 09/12/96

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L
1311	09/09/96	6010	09/10/96	7439-92-1	Lead	0.1	0.1 U

U Analyte undetected at given RL

RL Reporting Limits

ANALYTICAL
RESOURCES
INCORPORATED

INORGANICS ANALYSIS DATA SHEET Sample No: 20% C+Na
TCLP METALS

Lab Sample ID: Q061E
LIMS ID: 96-14870
Matrix: Soil

QC Report No: Q061-Boeing Corporate SHEA
Project: Queen City Farms

Date Sampled: 09/09/96
Date Received: 09/09/96

Data Release Authorized: CTJ
Reported: 09/12/96

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L
1311	09/09/96	6010	09/10/96	7439-92-1	Lead	0.1	0.1 U

U Analyte undetected at given RL

RL Reporting Limits

ANALYTICAL
RESOURCES
INCORPORATED

INORGANICS ANALYSIS DATA SHEET Sample No: 9% C only
TCLP METALS

Lab Sample ID: Q061F
LIMS ID: 96-14871
Matrix: Soil

QC Report No: Q061-Boeing Corporate SHEA
Project: Queen Ciy Farms

Date Sampled: 09/09/96
Date Received: 09/09/96

Data Release Authorized: CTJ
Reported: 09/12/96

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L
1311	09/09/96	6010	09/10/96	**7439-92-1**	**Lead**	0.1	**1.0**

U Analyte undetected at given RL

RL Reporting Limits

ANALYTICAL
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INORGANICS ANALYSIS DATA SHEET Sample No: 12% C only
TCLP METALS

Lab Sample ID: Q061G
LIMS ID: 96-14872
Matrix: Soil

QC Report No: Q061-Boeing Corporate SHEA
Project: Queen City Farms

Date Sampled: 09/09/96
Date Received: 09/09/96

Data Release Authorized: GY
Reported: 09/12/96

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L
1311	09/09/96	6010	09/10/96	7439-92-1	Lead	0.1	0.1 U

U Analyte undetected at given RL

RL Reporting Limits

ANALYTICAL
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INORGANICS ANALYSIS DATA SHEET Sample No: 15% C only
TCLP METALS

Lab Sample ID: Q061H
LIMS ID: 96-14873
Matrix: Soil

QC Report No: Q061-Boeing Corporate SHEA
Project: Queen City Farms

Date Sampled: 09/09/96
Date Received: 09/09/96

Data Release Authorized:
Reported: 09/12/96

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L
1311	09/09/96	6010	09/10/96	7439-92-1	Lead	0.1	0.1 U

U Analyte undetected at given RL

RL Reporting Limits

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INORGANICS ANALYSIS DATA SHEET Sample No: Untreated Soil Comp
TCLP METALS

Lab Sample ID: Q061I
LIMS ID: 96-14874
Matrix: Soil

QC Report No: Q061-Boeing Corporate SHEA
Project: Queen City Farms

Date Sampled: 09/09/96
Date Received: 09/09/96

Data Release Authorized: CRY
Reported: 09/12/96

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L
1311	09/09/96	6010	09/10/96	**7439-92-1**	**Lead**	0.02	**21.5**

U Analyte undetected at given RL

RL Reporting Limits

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INORGANICS ANALYSIS DATA SHEET Sample No: Method Blank
TCLP METALS

Lab Sample ID: Q061MB
LIMS ID: 96-14866
Matrix: Soil

QC Report No: Q061-Boeing Corporate SHEA
Project: Queen City Farms

Date Sampled: NA
Date Received: NA

Data Release Authorized: GTJ
Reported: 09/12/96

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L
1311	09/09/96	6010	09/10/96	7439-92-1	Lead	0.02	0.02 U

U Analyte undetected at given RL

RL Reporting Limits

ANALYTICAL
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INORGANICS ANALYSIS DATA SHEET Sample No: Method Blank
TCLP METALS

Lab Sample ID: Q061MB
LIMS ID: 96-14874
Matrix: Soil

QC Report No: Q061-Boeing Corporate SHEA
Project: Queen City Farms

Date Sampled: NA
Date Received: NA

Data Release Authorized: CTY
Reported: 09/12/96

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L
1311	09/09/96	6010	09/10/96	7439-92-1	Lead	0.02	0.02 U

U Analyte undetected at given RL

RL Reporting Limits

Analytical Resources, Incorporated
Analytical Chemists and Consultants

1 November 1996

Brian Anderson
The Boeing Company
Queen City Farms
22715 SE 168th Way
Maple Valley, WA 98038

RE: Project: QCF Waste Characterization / ARI Job Q106 parts 1 and 2

Dear Brian:

Please find enclosed an original chain of custody (COC) record and a set of analytical results for the above referenced project. One solid sample was received in good condition from Soil Technology, Inc. on September 12, 1996.

The sample was initially extracted by method 1311 (TCLP) on September 12th and was analyzed by method 6010 (ICP) on September 16th. Based on the initial analysis results, Ted Wall of Woodward Clyde Consultants requested that we perform a reanalysis. The sample was extracted again on September 17th and was analyzed on September 19th. Secondary results showed non-detect for TCLP lead.

Quality control analysis results are included for your review. Copies of the reports will be kept on file at ARI. Please contact me if you have any questions.

Sincerely,

ANALYTICAL RESOURCES, INC.

Jeff J. Reitan
Project Manager
(206) 389-6153

JJR/jr
enclosure

cc: Ted Wall: Woodward Clyde Consultants

Results by 9/13/96

Soil Technology, Inc.
7865 NE Day Rd. W., Bainbridge Isl., WA 98110
(206) 842-8977 FAX: (206) 842-9014

CHAIN OF CUSTODY RECORD/ANALYSIS REQUEST

STI JOB NO. T-970

9106 QUEEN CITY FARMS

Project Name: Boeing Western Processing	Project Number:	Site Location: Maple Valley
Client: Boeing / Woodward Clyde	Report To: Ted Wall Woodward Clyde	Billing To: Boeing
Address:	Phone:	P/O#/Billing Refernce:
Turnaround Time: ☒ 1-2 Day ☐ 3-5 Day ☐ 10 Day ☐ 30 Day ☐ Other		
Sampler: H. Benny	Date: 9/12/96	

Sample ID# / Station:	Sample Description:	Number of Containers	Type of Ct	Sampling Time/Date:	TCLP Pb					Remarks:	Sample Number:
1	10% Cement/Bentonite	1	Jar	7:30 9/12/96	✓						

Special Shipment / Handling or Storage Requirements:

Shipping Method:

Relinquished By:	Received By:	Relinquished By:	Received By:
H. Benny	Jan Folkens		
Signature: H Benny	Signature: Jan Folkens	Signature	Signature
Printed Name: Soil Technology	Printed Name	Printed Name	Printed Name
Company	Company AGRA	Company	Company
Date: 9/12/96 Time: 8:00	Date 9/12/96 Time 2:15	Date Time	Date Time

ANALYTICAL
RESOURCES
INCORPORATED

INORGANICS ANALYSIS DATA SHEET Sample No: 1
TCLP METALS

Lab Sample ID: Q106A
LIMS ID: 96-15146
Matrix: Soil

QC Report No: Q106-Boeing Corporate SHEA
Project: Queen City Farms

Date Sampled: 09/12/96
Date Received: 09/12/96

Data Release Authorized: CTJ
Reported: 09/17/96

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L
1311	09/12/96	6010	09/16/96	**7439-92-1**	**Lead**	0.1	**9.0**

U Analyte undetected at given RL

RL Reporting Limits

ANALYTICAL
RESOURCES
INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TCLP METALS

Sample No: 1
Lab Sample ID: Q106A
QC Report No: Q106-Boeing Corporate SHEA
LIMS ID: 96-15146
Project: Queen City Farms
Matrix: Soil

Date Received: 09/12/96

Data Release Authorized: CTH
Reported: 09/17/96

MATRIX SPIKE QUALITY CONTROL REPORT

Analyte	Sample mg/L	Spike mg/L	Spike Added	% Recovery	Q
Lead	9.0	33.1	25.0	96.4%	

'Q' codes:
N = control limit not met
H = %R not applicable, sample concentration too high
* = RPD control limit not met
NA = Not applicable - analyte not spiked

Control Limits:
Percent Recovery: 75-125%
RPD: +/-20%

ANALYTICAL
RESOURCES
INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TCLP METALS

Sample No: 1
Lab Sample ID: Q106A
QC Report No: Q106-Boeing Corporate SHEA
LIMS ID: 96-15146
Project: Queen City Farms
Matrix: Soil

Date Received: 09/12/96

Data Release Authorized: LTY
Reported: 09/17/96

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Sample mg/L	Duplicate mg/L	RPD	Control Limit	Q
Lead	9.0	8.9	1.1%	+/- 20 %	

'Q' codes:
* = control limit not met
L = RPD not valid, alternate limit = detection limit

ANALYTICAL
RESOURCES
INCORPORATED

INORGANICS ANALYSIS DATA SHEET **Sample No:** **Method Blank**
TCLP METALS

Lab Sample ID: Q106MB
LIMS ID: 96-15146
Matrix: Soil

QC Report No: Q106-Boeing Corporate SHEA
Project: Queen City Farms

Date Sampled: NA
Date Received: NA

Data Release Authorized: LTY
Reported: 09/17/96

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L
1311	09/12/96	6010	09/16/96	7439-92-1	Lead	0.02	0.02 U

U Analyte undetected at given RL

RL Reporting Limits

FORM-I

ANALYTICAL
RESOURCES
INCORPORATED

INORGANICS ANALYSIS DATA SHEET Sample No: 1
TCLP METALS

Lab Sample ID: Q106A
LIMS ID: 96-15544
Matrix: Soil

QC Report No: Q106-Boeing Corporate SHEA
Project: Queen City Farms

Date Sampled: 09/12/96
Date Received: 09/12/96

Data Release Authorized: GY
Reported: 09/20/96

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L
1311	09/17/96	6010	09/19/96	7439-92-1	Lead	0.1	0.1 U

U Analyte undetected at given RL

RL Reporting Limits

ANALYTICAL
RESOURCES
INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TCLP METALS

Sample No: 1
Lab Sample ID: Q106A
QC Report No: Q106-Boeing Corporate SHEA
LIMS ID: 96-15544
Project: Queen City Farms
Matrix: Soil

Date Received: 09/12/96

Data Release Authorized: KTH
Reported: 09/20/96

MATRIX SPIKE QUALITY CONTROL REPORT

Analyte	Sample mg/L	Spike mg/L	Spike Added	% Recovery	Q
Lead	0.1 U	23.8	25.0	95.2%	

'Q' codes:
- N = control limit not met
- H = %R not applicable, sample concentration too high
- * = RPD control limit not met
- NA = Not applicable - analyte not spiked

Control Limits: Percent Recovery: 75-125%

ANALYTICAL
RESOURCES
INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TCLP METALS

Sample No: 1
Lab Sample ID: Q106A
QC Report No: Q106-Boeing Corporate SHEA
LIMS ID: 96-15544
Project: Queen City Farms
Matrix: Soil

Date Received: 09/12/96

Data Release Authorized: GG
Reported: 09/20/96

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Sample mg/L	Duplicate mg/L	RPD	Control Limit	Q
Lead	0.1 U	0.1 U	0.0%	+/- 0.1	L

'Q' codes:
* = control limit not met
L = RPD not valid, alternate limit = detection limit

ANALYTICAL
RESOURCES
INCORPORATED

INORGANICS ANALYSIS DATA SHEET Sample No: Method Blank
TCLP METALS

Lab Sample ID: Q106MB
LIMS ID: 96-15544
Matrix: Soil

QC Report No: Q106-Boeing Corporate SHEA
Project: Queen City Farms

Date Sampled: NA
Date Received: NA

Data Release Authorized: CTG
Reported: 09/20/96

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L
1311	09/17/96	6010	09/19/96	7439-92-1	Lead	0.02	0.02 U

U Analyte undetected at given RL

RL Reporting Limits

ATTACHMENT 2

Treated Soil, Mixing Pit, Stockpile Area Confirmation Sample Results

Analytical Resources, Incorporated
Analytical Chemists and Consultants

1 November 1996

Brian Anderson
The Boeing Company
Queen City Farms
22715 SE 168th Way
Maple Valley, WA 98038

RE: Project: QCF Waste Characterization / ARI Job Q429

Dear Brian:

Please find enclosed an original chain of custody (COC) record and a set of analytical results for the above referenced project. Five solid samples were received in good condition from Soil Technology, Inc. on October 9, 1996.

Sample analysis for TCLP lead proceeded without incident. Quality control analysis results are included for your review. Copies of the reports will be kept on file at ARI. Please contact me if you have any questions.

Sincerely,

ANALYTICAL RESOURCES, INC.

Jeff J. Reitan
Project Manager
(206) 389-6153

JJR/jr
enclosure

cc: Ted Wall: Woodward Clyde Consultants

Q424

WOODWARD-CLYDE
CHAIN OF CUSTODY RECORD

1501 Fourth Avenue Suite 1500
Seattle, Washington 98101
(206) 343-7933 fax (206) 343-0513

Project Name: Boeing - QCF
Project Number: 944057NB Project Manager: Ted Wall
Sampler (signature): [signature]
Shipping Form Tracking Number:
Page 1 of 1 Number of Coolers: NA

Date	Time	Sample Identification	Matrix	Lab ID	Analyses: Cooler Number / TCLP-Pb	Number of Containers
10/9/96	1115	QCFSS-1	Soil		✓	1
↓	1120	QCFSS-2	↓		✓	1
	1125	QCFSS-3			✓	1
	1130	QCFSS-4			✓	1
↓	1135	QCFSS-5	↓		✓	1

Comments: ① Analyze QCFSS-4 & -5 immediately, Analyze QCFSS-1, -2, and -3 on 10-17. ② Leave sample jar lids off during storage to allow cement curing ③ Retain QCFSS-4 & -5

Total Number of Containers: 5

Relinquished By (signature): [signature] Date/Time: 10/9/96 16:20
Relinquished By (signature): Date/Time:
Received By (Signature): [signature] Date/Time: 10/9/96 16:20
Received for Lab By (signature): Date/Time:

(COCSEA.xls) for potential re-analysis

ANALYTICAL
RESOURCES
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INORGANICS ANALYSIS DATA SHEET Sample No: QCFSS-4
TCLP METALS

Lab Sample ID: Q429A
LIMS ID: 96-17277
Matrix: Soil

QC Report No: Q429-Boeing Corporate SHEA
Project: 944057NB

Date Sampled: 10/09/96
Date Received: 10/09/96

Data Release Authorized:
Reported: 10/14/96

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L
1311	10/10/96	6010	10/11/96	7439-92-1	Lead	0.1	0.1 U

U Analyte undetected at given RL

RL Reporting Limits

ANALYTICAL
RESOURCES
INCORPORATED

INORGANICS ANALYSIS DATA SHEET Sample No: QCFSS-5
TCLP METALS

Lab Sample ID: Q429B
LIMS ID: 96-17278
Matrix: Soil

QC Report No: Q429-Boeing Corporate SHEA
Project: 944057NB

Date Sampled: 10/09/96
Date Received: 10/09/96

Data Release Authorized:
Reported: 10/14/96

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L
1311	10/10/96	6010	10/11/96	7439-92-1	Lead	0.1	0.1 U

U Analyte undetected at given RL

RL Reporting Limits

ANALYTICAL
RESOURCES
INCORPORATED

INORGANICS ANALYSIS DATA SHEET Sample No: Method Blank
TCLP METALS

Lab Sample ID: Q429MB
LIMS ID: 96-17277
Matrix: Soil

QC Report No: Q429-Boeing Corporate SHEA
Project: 944057NB

Date Sampled: NA
Date Received: NA

Data Release Authorized:
Reported: 10/14/96

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L
1311	10/10/96	6010	10/11/96	7439-92-1	Lead	0.02	0.02 U

U Analyte undetected at given RL

RL Reporting Limits

ANALYTICAL
RESOURCES
INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TCLP METALS

Sample No: QCFSS-4
Lab Sample ID: Q429A
QC Report No: Q429-Boeing Corporate SHEA
LIMS ID: 96-17277
Project: 944057NB
Matrix: Soil

Date Received: 10/09/96

Data Release Authorized:
Reported: 10/14/96

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Sample mg/L	Duplicate mg/L	RPD	Control Limit	Q
Lead	0.1 U	0.1 U	0.0%	+/- 0.1	L

'Q' codes:
* = control limit not met
L = RPD not valid, alternate limit = detection limit

ANALYTICAL
RESOURCES
INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TCLP METALS

Sample No: QCFSS-4
Lab Sample ID: Q429A — QC Report No: Q429-Boeing Corporate SHEA
LIMS ID: 96-17277 — Project: 944057NB
Matrix: Soil

Date Received: 10/09/96

Data Release Authorized:
Reported: 10/14/96

MATRIX SPIKE QUALITY CONTROL REPORT

Analyte	Sample mg/L	Spike mg/L	Spike Added	% Recovery	Q
Lead	0.1 U	23.6	25.0	94.4%	

'Q' codes:
- N = control limit not met
- H = %R not applicable, sample concentration too high
- * = RPD control limit not met
- NA = Not applicable - analyte not spiked

Control Limits:
- Percent Recovery: 75-125%
- RPD: +/-20%

ANALYTICAL
RESOURCES
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INORGANICS ANALYSIS DATA SHEET Sample No: QCFSS-1
TCLP METALS

Lab Sample ID: Q429C
LIMS ID: 96-17279
Matrix: Soil

QC Report No: Q429-Boeing Corporate SHEA
Project: 944057NB

Date Sampled: 10/09/96
Date Received: 10/18/96

Data Release Authorized:
Reported: 10/23/96

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L
1311	10/21/96	6010	10/22/96	7439-92-1	Lead	0.1	0.1 U

U Analyte undetected at given RL

RL Reporting Limits

ANALYTICAL
RESOURCES
INCORPORATED

INORGANICS ANALYSIS DATA SHEET **Sample No: QCFSS-2**
TCLP METALS

Lab Sample ID: Q429D
LIMS ID: 96-17280
Matrix: Soil

QC Report No: Q429-Boeing Corporate SHEA
Project: 944057NB

Date Sampled: 10/09/96
Date Received: 10/18/96

Data Release Authorized:
Reported: 10/23/96

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L
1311	10/21/96	6010	10/22/96	7439-92-1	Lead	0.1	0.1 U

U Analyte undetected at given RL

RL Reporting Limits

ANALYTICAL
RESOURCES
INCORPORATED

INORGANICS ANALYSIS DATA SHEET Sample No: QCFSS-3
TCLP METALS

Lab Sample ID: Q429E
LIMS ID: 96-17281
Matrix: Soil

QC Report No: Q429-Boeing Corporate SHEA
Project: 944057NB

Date Sampled: 10/09/96
Date Received: 10/18/96

Data Release Authorized:
Reported: 10/23/96

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L
1311	10/21/96	6010	10/22/96	7439-92-1	Lead	0.1	0.1 U

U Analyte undetected at given RL

RL Reporting Limits

ANALYTICAL
RESOURCES
INCORPORATED

INORGANICS ANALYSIS DATA SHEET **Sample No: Method Blank**
TCLP METALS

Lab Sample ID: Q429MB
LIMS ID: 96-17279
Matrix: Soil

QC Report No: Q429-Boeing Corporate SHEA
Project: 944057NB

Date Sampled: NA
Date Received: NA

Data Release Authorized:
Reported: 10/23/96

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L
1311	10/21/96	6010	10/22/96	7439-92-1	Lead	0.02	0.02 U

U Analyte undetected at given RL

RL Reporting Limits

INORGANICS ANALYSIS DATA SHEET
TCLP METALS

Sample No: QCFSS-1
Lab Sample ID: Q429C
QC Report No: Q429-Boeing Corporate SHEA
LIMS ID: 96-17279
Project: 944057NB
Matrix: Soil

Date Received: 10/18/96

Data Release Authorized:
Reported: 10/23/96

MATRIX SPIKE QUALITY CONTROL REPORT

Analyte	Sample mg/L	Spike mg/L	Spike Added	% Recovery	Q
Lead	0.1 U	23.8	25.0	95.2%	

'Q' codes:
N = control limit not met
H = %R not applicable, sample concentration too high
* = RPD control limit not met
NA = Not applicable - analyte not spiked

Control Limits:
Percent Recovery: 75-125%
RPD: +/-20%

INORGANICS ANALYSIS DATA SHEET
TCLP METALS

Lab Sample ID: Q429C
LIMS ID: 96-17279
Matrix: Soil

Sample No: QCFSS-1
QC Report No: Q429-Boeing Corporate SHEA
Project: 944057NB

Date Received: 10/18/96

Data Release Authorized:
Reported: 10/23/96

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Sample mg/L	Duplicate mg/L	RPD	Control Limit	Q
Lead	0.1 U	0.1 U	0.0%	+/- 0.1	L

'Q' codes: * = control limit not met
L = RPD not valid, alternate limit = detection limit

Analytical Resources, Incorporated
Analytical Chemists and Consultants

1 November 1996

Brian Anderson
The Boeing Company
Queen City Farms
22715 SE 168th Way
Maple Valley, WA 98038

RE: Project: QCF Waste Characterization / ARI Job Q509

Dear Brian:

Please find enclosed an original chain of custody (COC) record and a set of analytical results for the above referenced project. Seven solid samples were received in good condition from Soil Technology, Inc. on October 16, 1996.

Sample analysis for TCLP lead proceeded without incident. Quality control analysis results are included for your review. Copies of the reports will be kept on file at ARI. Please contact me if you have any questions.

Sincerely,

ANALYTICAL RESOURCES, INC.

Jeff J. Reitan
Project Manager
(206) 389-6153

JJR/jr
enclosure

cc: Ted Wall: Woodward Clyde Consultants

Q50

WOODWARD-CLYDE
CHAIN OF CUSTODY RECORD

1501 Fourth Avenue Suite 1500
Seattle, Washington 98101
(206) 343-7933 fax (206) 343-0513

Project Name: Boeing QCF
Project Number: 94105.NB Project Manager: Ted Wall
Sampler (signature): JLW
Shipping Form Tracking Number:
Page 1 of 1 Number of Coolers: NA

Date	Time	Sample Identification	Matrix	Lab ID	Analyses: Cooler Number — TCLP-Pb	Number of Containers
10/16/96	1115	QCFSS-6	Soil		✓	1
	1118	QCFSS-7			✓	1
	1120	QCFSS-8			✓	1
	1122	QCFSS-9			✓	1
	1124	QCFSS-10			✓	1
	1126	QCFSS-11			✓	1
↓	1128	QCFSS-12	↓		✓	1

Comments:

Total Number of Containers

Relinquished By (signature): JLW Date/Time 10/16/96 1334

Received By (Signature): Date/Time

Relinquished By (signature): Date/Time

Received for Lab By (signature): Janet Perkins Date/Time 10/16/96 13:

(COCSEA.xls)

ANALYTICAL
RESOURCES
INCORPORATED

INORGANICS ANALYSIS DATA SHEET **Sample No: QCFSS-6**
TCLP METALS

Lab Sample ID: Q509A
LIMS ID: 96-17760
Matrix: Soil

QC Report No: Q509-Boeing Corporate SHEA
Project: 944057NB

Date Sampled: 10/16/96
Date Received: 10/16/96

Data Release Authorized:
Reported: 10/25/96

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L
1311	10/21/96	6010	10/24/96	**7439-92-1**	**Lead**	0.02	**0.04**

U Analyte undetected at given RL

RL Reporting Limits

ANALYTICAL
RESOURCES
INCORPORATED

INORGANICS ANALYSIS DATA SHEET Sample No: QCFSS-7
TCLP METALS

Lab Sample ID: Q509B
LIMS ID: 96-17761
Matrix: Soil

QC Report No: Q509-Boeing Corporate SHEA
Project: 944057NB

Date Sampled: 10/16/96
Date Received: 10/16/96

Data Release Authorized:
Reported: 10/25/96

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L
1311	10/21/96	6010	10/24/96	7439-92-1	Lead	0.02	0.02 U

U Analyte undetected at given RL

RL Reporting Limits

ANALYTICAL
RESOURCES
INCORPORATED

INORGANICS ANALYSIS DATA SHEET Sample No: QCFSS-8
TCLP METALS

Lab Sample ID: Q509C
LIMS ID: 96-17762
Matrix: Soil

QC Report No: Q509-Boeing Corporate SHEA
Project: 944057NB

Date Sampled: 10/16/96
Date Received: 10/16/96

Data Release Authorized:
Reported: 10/25/96

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L
1311	10/21/96	6010	10/24/96	7439-92-1	Lead	0.02	0.02 U

U Analyte undetected at given RL

RL Reporting Limits

ANALYTICAL
RESOURCES
INCORPORATED

INORGANICS ANALYSIS DATA SHEET Sample No: QCFSS-9
TCLP METALS

Lab Sample ID: Q509D
LIMS ID: 96-17763
Matrix: Soil

QC Report No: Q509-Boeing Corporate SHEA
Project: 944057NB

Date Sampled: 10/16/96
Date Received: 10/16/96

Data Release Authorized:
Reported: 10/25/96

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L
1311	10/21/96	6010	10/24/96	7439-92-1	Lead	0.02	0.02 U

U Analyte undetected at given RL

RL Reporting Limits

ANALYTICAL
RESOURCES
INCORPORATED

INORGANICS ANALYSIS DATA SHEET Sample No: QCFSS-10
TCLP METALS

Lab Sample ID: Q509E
LIMS ID: 96-17764
Matrix: Soil

QC Report No: Q509-Boeing Corporate SHEA
Project: 944057NB

Date Sampled: 10/16/96
Date Received: 10/16/96

Data Release Authorized:
Reported: 10/25/96

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L
1311	10/21/96	6010	10/24/96	7439-92-1	Lead	0.02	0.02 U

U Analyte undetected at given RL

RL Reporting Limits

ANALYTICAL
RESOURCES
INCORPORATED

INORGANICS ANALYSIS DATA SHEET Sample No: QCFSS-11
TCLP METALS

Lab Sample ID: Q509F
LIMS ID: 96-17765
Matrix: Soil

QC Report No: Q509-Boeing Corporate SHEA
Project: 944057NB

Date Sampled: 10/16/96
Date Received: 10/16/96

Data Release Authorized:
Reported: 10/25/96

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L
1311	10/21/96	6010	10/24/96	7439-92-1	Lead	0.02	0.02 U

U Analyte undetected at given RL

RL Reporting Limits

ANALYTICAL
RESOURCES
INCORPORATED

INORGANICS ANALYSIS DATA SHEET Sample No: QCFSS-12
TCLP METALS

Lab Sample ID: Q509G
LIMS ID: 96-17766
Matrix: Soil

QC Report No: Q509-Boeing Corporate SHEA
Project: 944057NB

Date Sampled: 10/16/96
Date Received: 10/16/96

Data Release Authorized:
Reported: 10/25/96

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L
1311	10/21/96	6010	10/24/96	7439-92-1	Lead	0.02	0.02 U

U Analyte undetected at given RL

RL Reporting Limits

ANALYTICAL
RESOURCES
INCORPORATED

INORGANICS ANALYSIS DATA SHEET **Sample No: Method Blank**
TCLP METALS

Lab Sample ID: Q509MB
LIMS ID: 96-17760
Matrix: Soil

QC Report No: Q509-Boeing Corporate SHEA
Project: 944057NB

Date Sampled: NA
Date Received: NA

Data Release Authorized:
Reported: 10/25/96

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L
1311	10/21/96	6010	10/24/96	7439-92-1	Lead	0.02	0.02 U

U Analyte undetected at given RL

RL Reporting Limits

ANALYTICAL
RESOURCES
INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TCLP METALS

Sample No: QCFSS-6
Lab Sample ID: Q509A — QC Report No: Q509-Boeing Corporate SHEA
LIMS ID: 96-17760 — Project: 944057NB
Matrix: Soil

Date Received: 10/16/96

Data Release Authorized:
Reported: 10/25/96

MATRIX SPIKE QUALITY CONTROL REPORT

Analyte	Sample mg/L	Spike mg/L	Spike Added	% Recovery	Q
Lead	0.04	4.98	5.00	98.8%	

'Q' codes:
- N = control limit not met
- H = %R not applicable, sample concentration too high
- * = RPD control limit not met
- NA = Not applicable - analyte not spiked

Control Limits:
- Percent Recovery: 75-125%
- RPD: +/-20%

ANALYTICAL
RESOURCES
INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TCLP METALS

Sample No: QCFSS-6
Lab Sample ID: Q509A — QC Report No: Q509-Boeing Corporate SHEA
LIMS ID: 96-17760 — Project: 944057NB
Matrix: Soil

Date Received: 10/16/96

Data Release Authorized:
Reported: 10/25/96

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Sample mg/L	Duplicate mg/L	RPD	Control Limit	Q
Lead	0.04	0.04	0.0%	+/- 0.02	L

'Q' codes: * = control limit not met
L = RPD not valid, alternate limit = detection limit